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EXAMINER

NGUYEN, HOAN C

ART UNIT PAPER NUMBER

2871

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/850,367

Applicant(s)

HA ET AL.

Examiner

HOAN C. NGUYEN

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 1-33 and 43-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-42 and 50-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 June 2005 has been entered.

### ***Response to Amendment***

Applicant's arguments with respect to amended claims 34-36, 38-39, 41-42, 50 and 51 based on the Preliminary Amendment filed on 08 July 2005 have been considered but are moot in view of the new ground(s) of rejection.

### **Drawings**

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "600" has been used to designate both rear case and mold frame (in claim 50).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the fixing unit is

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shorter than the highest one of element constituting the PCB" in claim 42 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 50 is objected to because of the following informalities: "a rear case" and "a mold frame" both are the same element as Fig. 4 disclosed. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 34, 36-41, 50 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Cargin, Jr. et al. (US5515303A).

Cargin, Jr. et al. teach (Fig. 2) a liquid crystal display device comprising:

Claim 34 and 52:

- displaying unit (a display panel 13) for displaying an image;
- a bottom chassis (PCB 43 considers as bottom chassis and frame surrounding display panel 13 considers as top chassis) receiving the displaying unit;
- a mold frame (bottom housing 12) receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis;
- a printed circuit board 37/26 directly mounted on a bottom surface of the bottom chassis;

Claim 50:

- a front case (top housing 11);
- a rear case (bottom housing 12);
- a liquid crystal display device disposed between the front case and rear case and comprising:
  - displaying unit (a display panel 13) for displaying an image;

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- a bottom chassis (PCB 43 considers as bottom chassis and frame surrounding display panel 13 considers as top chassis) receiving the displaying unit;
- a mold frame 12 receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis;
- a printed circuit board 37/26 directly mounted on a bottom surface of the bottom chassis;

Claim 36:

- the opening exposes a center portion of the bottom surface of the bottom chassis.

Claim 37:

- the printed circuit board includes:
  - a power supplying unit (battery) that supplies power to the display unit.
  - a signal converting unit (inherence) for converting a signal provided to the display unit.

Claims 38-40:

- a fixing unit (screw 88) for fixing the printed circuit board 70 to a bottom surface of the bottom chassis 12 according to claim 38; therefore, the printed circuit board is arranged between the bottom chassis and the fixing unit according to claim 39 and the printed circuit board is overlapped at one end thereof with the fixing unit according to 40.

Claim 41:

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- the fixing unit 88 including a bracket having a first end connected to the PCB and a second end connected to the bottom surface of the bottom chassis.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 34, 36-42, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US6229695B1) in view of Lutz, Jr. (US6181572B1).

Moon teaches (Figs. 2-8) a liquid crystal display device comprising:

#### Claim 34 and 52:

- displaying unit (a display panel 60) for displaying an image;
- a bottom chassis (frame 40) receiving the displaying unit;
- a frame (bottom housing 30) receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis;
- a printed circuit board 70 directly mounted on a bottom surface of the bottom chassis;

#### Claim 50:

- a front case (top housing 20);
- a rear case (bottom housing 30);

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- a liquid crystal display device 60 disposed between the front case and rear case and comprising:
  - displaying unit (a display panel 60) for displaying an image;
  - a bottom chassis (frame 40) receiving the displaying unit;
  - a frame (bottom housing 30) receive the bottom chassis and having an opening exposing a bottom surface of the bottom chassis;
  - a printed circuit board 70 directly mounted on a bottom surface of the bottom chassis;

wherein

Claim 36:

- the opening exposes a center portion of the bottom surface of the bottom chassis.

Claim 37:

- the printed circuit board includes:
  - a power supplying unit (battery) that supplies power to the display unit.
  - a signal converting unit (inherence) for converting a signal provided to the display unit.

Claims 38-40:

- a fixing unit (screw 76 and extension 58) for fixing the printed circuit board 70 to a bottom surface of the bottom chassis 40 at 58 according to claim 38;  
therefore, the printed circuit board is arranged between the bottom chassis and



the fixing unit according to claim 39 and the printed circuit board is overlapped at one end thereof with the fixing unit according to 40.

Claim 41:

- the fixing unit 76 including a bracket (extension 58) having a first end connected to the PCB and a second end connected to the bottom surface of the bottom chassis.

Claim 42:

- the fixing unit (extension 58) is shorter than the highest one of element constituting the PCB.

However, Moon fails to disclose the frame (bottom housing) formed by molding.

Lutz, Jr. teaches the housing is made of plastic, which is formed by molding.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device as Moon disclosed with the housing made of plastic, which is formed by molding for creating light weight and less expensive device for the same market as taught by Lutz, Jr. (col. 1 lines 29-31).

2. Claims 35 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cargin, Jr. et al. (US5515303A) as applied to claims 34, 36-41, 50 and 52 in view of Satoh (US6016083A).

Cargin, Jr. et al. do not explicitly disclose a liquid crystal display device comprising a shield case covering the PCB.

Satoh teaches (Fig. 6) a liquid crystal display device comprising a shield case covering the PCB.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device as Cargin, Jr. et al. disclosed with a shield case covering the PCB for suppressing noise generated by the electronic circuit is by-passed, and electromagnetic radiation of noise from a cable connected to the printed-circuit board via a connector, as taught by Lutz, Jr. (abstract).

3. Claims 35 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US6229695B1) in view of Lutz, Jr. (US6181572B1) as applied to claims 34, 36-42, 50 and 52 and in further view of Satoh (US6016083A).

Moon does not explicitly disclose a liquid crystal display device comprising a shield case covering the PCB.

Satoh teaches (Fig. 6) a liquid crystal display device comprising a shield case covering the PCB.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify a liquid crystal display device as Moon disclosed with a shield case covering the PCB for suppressing noise generated by the electronic circuit is by-passed, and electromagnetic radiation of noise from a cable connected to the printed-circuit board via a connector, as taught by Lutz, Jr. (abstract).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (571) 272-2296. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim H. Robert can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOAN C. NGUYEN  
Examiner  
Art Unit 2871

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**ROBERT KIM**  
**SUPERVISORY PATENT EXAMINER**